



Illinois Heartland American Chemical Society  
In cooperation with  
Peoria Astronomical Society & Lakeview Museum

Dr. Yorke E. Rhodes  
New York University

## Cosmic Chemistry

March 9, 2006  
7:30 p.m.

### Lakeview Museum Planetarium

1125 West Lake Avenue, Peoria IL 61614

At the dawn of the space age in the 1960s, a handful of molecules were known to exist in space. Since those days of early robotic exploration of the Moon and Mars, fly-bys with instrumental analysis of the outer planets, and radio astronomy of distant areas of our own galaxy and the universe have brought forth a burst of molecular information. About 120 molecules have been identified to date. What types and kinds of molecules exist? What varieties of molecular species have been found? How did they form, where do they occur, and what mechanisms exist for molecular formation? Can we model and predict what other molecules may occur? How has interstellar organic chemistry evolved? What does it all mean to us, here on Earth? Astrochemistry, the chemistry of the Cosmos, seeks to understand it.

Yorke Rhodes received a B. S. in soil chemistry, an M.S. and Ph.D. in organic chemistry at the University of Illinois. He held an IEEE Summer Fellowship at the Jet Propulsion Laboratories at Cal Tech in Pasadena in 1980-1981 (astrochemistry). In 1987, he was a visiting professor at the Centre d'Astrophysique, Universite de Grenoble, France (astro-polycyclic aromatic hydrocarbon chemistry). Rhodes was awarded the Golden Dozen Award for Teaching Excellence in the College of Arts and Science in 1991, and again in 1996. Professor Rhodes is Director of the Dual Degree Program in Science and Engineering at New York University and Stevens Institute of Technology, resides as Professor in a Residence in a University residence hall, and is very active in the New York Academy of Sciences and American Chemical Society. He has served on U. S. Department of Education review panels and is an educational consultant/evaluator for several undergraduate and high school research mentoring programs.

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